

## REMARKS

The Office Action mailed 21 June 2005 has been received and considered. Responsive to the indications of the Examiner has amended the claims in order to place the application in condition for allowance. Reconsideration of the application is requested.

### **REJECTION 35 USC SECTION 112:**

Claims 50-60, 68 and 69 stand rejected under 35 USC 112, first paragraph. Specifically, the Examiner has rejected the aforesaid claims in view of their reference and use of the terms “without drying the fines” (Claim 50) and “without regard to a free swelling index value.” (Claim 68) In an effort to advance the prosecution of this application, while not conceding on this issue, applicants have deleted the objected to language from the referenced claims. In view of these deletions, the indicated claims should now be in condition for allowance. Withdrawal of the instant rejection is therefore requested.

### **REJECTION UNDER 35 USC 103:**

Claims 32-37, 40-46, 48-53, 55-57, 59-75 and 78 stand rejected under 35 USC 103 over Loebell in view of Weber et al. (Weber). Applicants have amended claims 32, 41, 50, 61, 63 and 68, and effectively the claims dependent therefrom. As amended, the claims are now directed to a “continuous” method to produce high grade coke. Furthermore, each of the amended claims contains the limitation that the mixture of low grade coke fines and another type of carbonaceous material (e.g. waste coke fines) is adjusted, prior to the introduction of the mixture into the pyrolyzer, such that the pyrolytic by-products produced by a pyrolyzation of the mixture do not exceed the quantity of by-products which would be necessary to maintain the continuous operation of the method. Stated otherwise, for example the amount of tar effluent which would be produced by pyrolyzation of the mixture would not exceed the quantity of tar which would be required for processing a subsequent mixture to be introduced into the pyrolyzer. Further, the amount of combustible off-gas produced by the pyrolyzation of the mixture would not exceed the

amount of combustion gas which would be required in order to fuel the pyrolyzer for the pyrolyzation of the subsequent mixture to be introduced into the pyrolyzer. Support for the amendment to applicants' claim to include this particular limitation is found at page 5, lines 15-17; page 10, lines 7-10; page 11, lines 11-20; page 11, line 21 through page 13, line 10; and page 14, lines 20-21;

Applicants respectfully submit that these limitations are neither taught nor suggested in Loebell nor Weber, either individually or in combination.

Loebell does not appear to discuss the reintroduction of tars and combustible off-gasses back into the pyrolyzer. Weber does not appear to teach adjusting the composition of the mixture to be introduced into the pyrolyzer in order to achieve a quantity of pyrolytic by-products which does not exceed the quantity of such by-products which would be required to process the succeeding mixture to be introduced into the pyrolyzer. Weber actually teaches introducing mixtures into the pyrolyzer which produce excess tar and combustion off-gas by-products. With respect to the production of excess by-product gas, as noted at col. 7, lines 25-30, the Weber process produces a quantity of excess gas which is directed off through line 78. See Fig. 2. There is does not appear to be an indication that this "excess gas" is reintroduced into the pyrolyzer as fuel. In the example provided by Weber, an excess quantity of gas is produced. Weber indicates at col. 7, lines 11-17, that of the 30,000 m<sup>3</sup>n of by-product gas produced during the coking process, only 9,000 m<sup>3</sup>n is required for heating the coking stage. Of the remaining 21,000 m<sup>3</sup>n of by-product gas, 18,000 m<sup>3</sup>n of the by-product gas is described by Weber as being "in excess." (See col. 7, line 17). It follows that Weber does not teach a process which produces only that amount of waste gas which is needed in order to provide for the continuous operation of the process. Weber does not appear to disclose nor suggest adjusting the composition of the mixture being introduced into the pyrolyzer so as to limit the byproduct gas being produced from the pyrolyzation of the mixture to that amount required to fuel the pyrolyzer for processing a subsequent mixture to be introduced into the pyrolyzer.

With respect to tar byproducts, Weber likewise does not appear to contain a teaching or suggestion that the mixture be formulated so as to only produce the amount of tar which is necessary to maintain the continuity of a process for producing coke. While Weber does mention the withdrawal of tar from line 87 after the pump 89 (Fig. 2) and its subsequent introduction into

the mixing tank 95, Weber also indicates that tar is also removed from separator 115 and is withdrawn through lines 116 and 117. (Fig. 2 and col. 8, lines 7-10.) There does not appear to be any indication in Weber's disclosure that the tars passing through lines 117 and 116 are reintroduced into the coking chamber. It follows that Weber does not appear to teach a method wherein tar by-products are limited to a quantity not to exceed the quantity necessary to maintain the continuous operation of the method.

Neither Loebell nor Weber appear to contain any teaching or suggestion that the material composition of the mixture of fines should be formulated or adjusted with the objective of only producing pyrolytic by-products in amounts sufficient to be reintroduced back into the coking process to maintain the continuity of that process. Neither Loebell nor Weber appear to disclose or suggest modifying the nature of the mixture to be introduced into the pyrolyzer with the objective of restricting the by-products produced by pyrolyzation to levels which could be consumed by the subsequent quantity of mixture introduced into the pyrolyzer. Neither Loebell nor Weber appear to teach or suggest the instant applicants' method of eliminating the need to dispose of waste byproducts by adjusting the formulation of the mixture prior to its introduction into the pyrolyzer.

In view of the above considerations, applicants respectfully submit that the claims, as amended, are not rendered obvious by either Loebell or Weber, either individually or in combination.

Claims 38, 39, 47, 54, 76 and 77 stand rejected under 35 USC 103(a) over Loebell in view of Weber and further in view of Nicaud et al (Nicaud). Applicants respectfully submit that the identified claims are not rendered obvious by Loebell, Weber or Nicaud, either individually or in combination.

As noted above, the instant claims require that the mixture be adjusted in order to only produce by-products in quantities which do not exceed the quantities required to maintain the continuity of the coking process. As further noted above, neither Loebell or Weber disclose or suggest this particular limitation of applicants' claims. Applicants respectfully submit that similar to Loebell and Weber, Nicaud likewise neither teaches nor suggests adjusting the composition of the mixture to be pyrolyzed so as to produce only those quantities of by-products required to maintain the ongoing continuity of the coking process. In the absence of any teaching

to adjust the composition of the mixture in Nicaud, applicants respectfully submit that any combination of Loebell, Weber and Nicaud does not render the instant claims obvious.

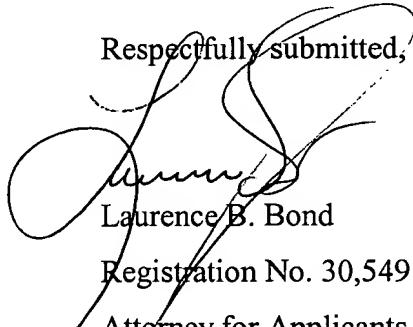
Accordingly, applicants maintain that the instant rejection should be withdrawn.

Claim 58 stands rejected under 35 USC 103(a) over Loebell in view of Weber et al and further in view of Deering. Applicants respectfully submit that the identified claims are not rendered obvious by Loebell, Weber or Deering, either individually or in combination.

Claim 58 requires that the mixture be adjusted in the amount of its constituents in order to only produce by-products in quantities which do not exceed the quantities required to maintain the continuity of the coking process. Neither Loebell or Weber disclose or suggest this particular limitation of applicants' claim. Applicants respectfully submit that Deering likewise neither teaches nor suggests adjusting the composition of the mixture to be pyrolyzed so as to produce only those quantities of by-products required to maintain the ongoing continuity of the coking process. In the absence of any teaching to adjust the composition of the mixture in Deering, applicants respectfully submit that any combination of Loebell, Weber and Deering does not render the instant claims obvious. Accordingly, applicants maintain that the instant rejection should be withdrawn.

**CONCLUSION:**

In view of the considerations indicated above, applicants respectfully submit that the pending claims of the application are presently in condition for allowance. Reconsideration of the claims and the withdrawal of the outstanding rejections is therefore requested.

Respectfully submitted,  
  
Laurence B. Bond  
Registration No. 30,549  
Attorney for Applicants

TRASKBRITT, PC  
P.O. Box 2550  
Salt Lake City, Utah 84110-2550  
Telephone: 801-532-1922

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LBB/dh/tlb